Revision of the Nematoids of the Gulf of Marseilles.

By M. A. F. Marion.

The recent note by M. Villot on the peripheral nervous system of the Nematoids determines me to defer no longer some rectifications which I intended for a general memoir on the mode of distribution of the marine animals of the gulf of Marseilles. M. Villot indicates in the hypodermal layer of the oceanic Nematoids a remarkable nervous network identical with that which he has described in *Gordius*. This interesting publication greatly modifies the notions that we had as to the sensory apparatus of these little worms. It is only necessary to glance through Bastian's important memoirs (Phil. Trans. 1866, p. 565, and Trans. Linn. Soc. 1865, part 2, p. 83) in order to see how unsettled this question remained. I hope to resume this anatomical investigation upon the species of the Etang de Berre, and to profit by the statements of M. Villot. It is desirable to determine exactly the nature of that œsophageal ring that Bastian refers to the glandular system. The rectifications that I shall now present relate solely to the systematic arrangement of the species of the shores of Marseilles.

The groups that I formerly proposed correspond exactly with those established by Bastian. My genera *Amphistenus*, *Stenolaimus*, *Heterocephalus*, *Thoracostoma*, and *Enoplostoma* are synonymous with his genera *Symplocostoma*, *Anticoma*, *Phanoderma*, *Leptosomatum*, and *Enoplus*. It is difficult to compare the species with a transversely striated cuticle. I recognize in Bastian's figures various tegumentary adornments that I have observed on the Nematoids of Marseilles; but the buccal and penial armatures appear to differ completely, although their details are not always very distinctly represented. The genera *Lasiomitus*, *Eurystoma*, *Necticonema*, *Rhabdotoderma*, and *Acanthopharynx* may therefore be retained. I may add that *Symplocostoma longicollis*, Bast., is probably the same worm that I have called *Amphistenus agilis*, and which does not differ from the *Enoplus tenuicollis* of Eberth. In the same way *Heterocephalus laticollis*, Mar., is identical with *Phanoderma Cocksi*, Bast., the supplementary penial plate of which is not represented in the plates of the monograph of the Anguillulidæ.

To the same species I do not hesitate to refer the *Enoplus tuberculatus* of Eberth. Bastian gives new characters for the genus *Enoplus* of Dujardin, from which he excludes the freshwater worms. The group thus limited corresponds to my genus *Enoplostoma*. *Enoplostoma hirtum* of Marseilles is the same as *Enoplus communis*, Bast., of the English coasts. It is impossible to separate from this species *Enoplus macrophthalmus*, Eberth, *E. Dujardinii*, Bast., and *E. pigmentosus*, Bast. Lastly *Thoracostoma echinodon*, Mar., is synonymous with *Leptosomatum figuratum*, Bast.

It is evident to me that many Nematoids inhabit both the ocean and the Mediterranean. The four species just cited (*Symplocostoma longicollis*, *Phanoderma Cocksi*, *Enoplus communis*, and *Leptosomatum figuratum*), observed by Bastian on the shores of the

British Isles, are very common in the gulf of Marseilles. They live among the seaweeds of the shore, and even resist the impure waters of the harbour of Arene.

This great geographical extension is still more surprising in respect of the freshwater Nematoids. In the pools of La Torse, in the neighbourhood of Aix in Provence, I obtained *Dorylaimus stagnalis*, Duj., and *Trilobus pellucidus*, Bast., of the English ponds. Probably M. Villot will find in Brittany most of the species indicated in the Mediterranean. The imperfection of some of Bastian's figures does not enable me, in the case of several worms, to propose an identification which nevertheless may be foreseen.—*Comptes Rendus*, February 22, 1875, p. 499.

On a new Order of Eocene Mammals. By Prof. O. C. Marsh.

At the last meeting of the Connecticut Academy, Feb. 17th, Prof. O. C. Marsh made a communication on a new order of Eocene mammals, for which he proposed the name "Tillodontia." These animals are among the most remarkable yet discovered in American strata, and seem to combine characters of several distinct groups, viz. Carnivores, Ungulates, and Rodents. In *Tillotherium*, Marsh, the type of the order, the skull has the same general form as in the bears, but in its structure resembles that of Ungulates. The molar teeth are of the Ungulate type; the canines are small; and in each jaw there is a pair of large scalpriform incisors faced with enamel, and growing from persistent pulps, as in Rodents. The adult dentition is as follows:—incisors $\frac{2}{2}$; canines $\frac{1}{1}$; premolars $\frac{3}{2}$; molars $\frac{3}{3}$. The articulation of the lower jaw with the skull corresponds to that in Ungulates. The posterior nares open behind the last upper molars. The brain was small, and somewhat convoluted. The skeleton most resembles that of Carnivores, especially the Ursidæ; but the scaphoid and lunar bones are not united, and there is a third trochanter on the femur. The radius and ulna, and the tibia and fibula are distinct. The feet are plantigrade; and each had five digits, all terminated with long, compressed, and pointed ungual phalanges, somewhat similar to those in the bears. The other genera of this order are less known; but all apparently had the same general characters. There are two distinct families:—*Tillotheridæ*, in which the large incisors grew from persistent pulps, while the molars have roots; and the *Stylinodontidæ*, in which all the teeth are rootless. Some of the animals of this group were as large as a tapir. With *Hyrax*, or the Toxodontia, the present order appears to have no near affinities.—*Silliman's American Journal*, March 1875.

On the Mediterranean Species of the Genus Eusyllis.
By M. A. F. Marion.

I have lately indicated, under the name of *Eusyllis lamelligera*, an annelide of the Gulf of Marseilles, belonging to the remarkable